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EXAMINER
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CLEMENT, MICHELLE RENEE

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/674,047  
Filing Date: September 29, 2003  
Appellant(s): KAPELES ET AL.

**MAILED**

SEP 06 2007

**GROUP 3600**

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Thomas C. Saitta  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 5/29/07 appealing from the Office action mailed 9/25/06.

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**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

No amendment after final has been filed.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is deficient. 37 CFR 41.37(c)(1)(v) requires the summary of claimed subject matter to include: (1) a concise explanation of the subject matter defined in each of the independent claims involved in the appeal, referring to the specification by page and line number, and to the drawing, if any, by reference characters and (2) for each independent claim involved in the appeal and for each dependent claim argued separately, every means plus function and step plus function as permitted by 35 U.S.C. 112, sixth paragraph, must be identified and the structure, material, or acts described in the specification as corresponding to each claimed function must be set forth with reference to the specification by page and line number, and to the drawing, if any, by reference characters. The brief is deficient because Appellant states that independent Claims 14 and 27 contain means plus function language, however the language of claims 14 and 27 does not fall under the scope of § 112, sixth paragraph because the language of the claims does not meet the 3-prong analysis under MPEP 2181.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

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**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

3,911,824	BARR ET AL.	10-1975
3,865,038	BARR	2-1975
2004/0069177	KLEIN	4-2004

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 103***

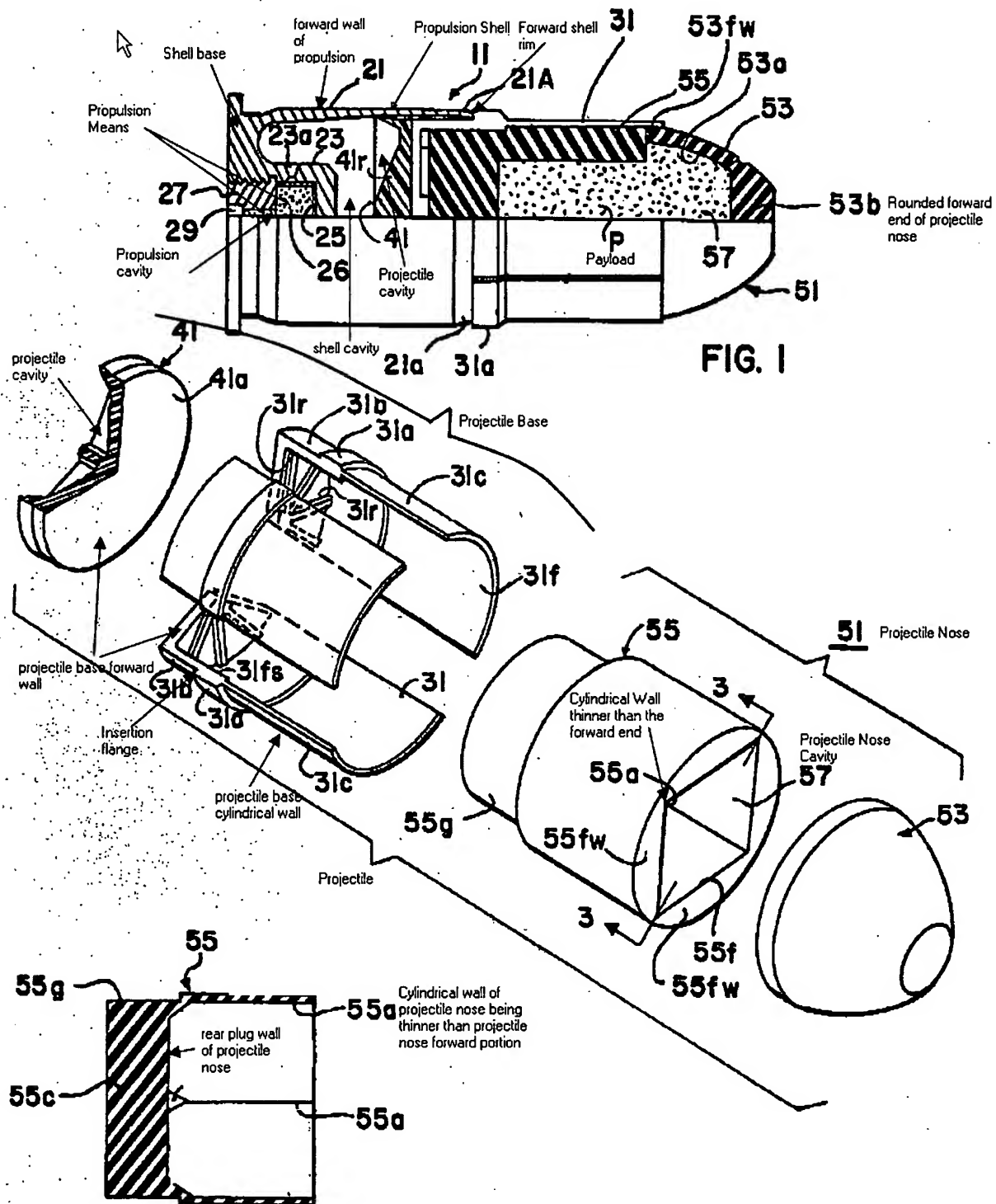
The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 14, 16, 18-23 and 25-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barr et al. (US Patent # 3,911,824) and Klein (US Patent Application # 2004/0069177). Barr et al. discloses a non-lethal impact munition comprising a projectile fig 2) comprising a projectile nose and a projectile base (see examiner's notes on figures below), the projectile separably joined to a propulsion shell (reference 21) comprising propulsion means (reference 29 and 26) to separate the projectile from the propulsion shell, the projectile nose composed of a frangible, rigid material characterized in that the projectile nose is crushed upon impact with a target in a manner that absorbs and dissipates energy of impact (column 3, lines 25-68), the projectile nose comprising a cavity (reference 57), wherein the projectile nose has a rounded forward end

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(reference 53b) and a cylindrical wall (reference 55), the cylindrical wall being thinner (reference 55a) than the forward end, such that the thinner cylindrical wall breaks prior to the forward end upon impact to absorb and dissipate impact energy (column 3, lines 54-68). The munition comprising a payload (reference P) disposed within the cavity, wherein the payload is laterally dispersed from the cavity upon impact through the thinner cylindrical wall. The payload including a finely divided particulate or powder such as tear gas powder. The projectile nose further comprising a rear plug wall (reference 55c) joined to the cylindrical wall, the combination of the forward end, the cylindrical wall and the rear plug wall defining a nose cavity. Wherein the rear plug wall is joined to the projectile base. The projectile base comprises a forward wall joined to a cylindrical wall. The rear plug wall is joined to the forward wall of the projectile base. The propulsion shell comprising an annular forward wall (reference 21) having a forward shell rim, a shell base joined to the shell forward wall, and a propulsion cavity (reference 25) disposed in the shell base, the propulsion means being retained by the propulsion cavity, the projectile base comprising a forward wall joined to a cylindrical wall to define a projectile cavity and a rearward extending annular insertion flange, whereby the insertion flange is received within the shell rim and the shell forward wall such that the shell cavity and the projectile cavity are combined (i.e. area in Figure 1 between 41 and 23). The projectile nose is sufficiently rigid to maintain aerodynamic stability during flight but is sufficiently frangible to crush upon impact with a target in a manner that absorbs and dissipates energy of impact to reduce the energy transferred to such target by the projectile.



Although Barr et al. does not expressly disclose the projectile nose composed of a polymer foam material, Klein does. Klein teaches a non-lethal projectile ammunition comprising a projectile

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comprising a projectile nose composed from Styrofoam (i.e. polymer foam), a projectile base and a payload comprising a chemical agent mixed with a marking powder. Barr et al. and Klein are analogous art because they are from the same field of endeavor: non-lethal projectiles. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the Styrofoam material for the nose as taught by Klein with the non-lethal projectile as taught by Barr et al. The suggestion/motivation for doing so would have been to obtain a non-lethal projectile that had adequate stiffness during flight as taught by Klein ¶ 49. Barr et al. and Klein disclose the claimed invention except for the foam material expressly having a density between approximately 8 and 14 pounds per cubic foot. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a foam material having the specific density, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice and the substitution of one known material for another would have yielded predictable results to one of ordinary skill in the art at the time of the invention. *In re Leshin*, 125 USPQ 416.

Claims 27 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barr (US Patent # 3,865,038), Barr et al. (US Patent # 3,911,824) and Klein (US Patent Application 2004/0069177). Barr discloses a non-lethal munition that can be carried and used in combination with a cartridge case carrying a propellant. The munition comprising a projectile comprising a projectile nose and a projectile base, the projectile base comprising a forward wall (reference 23) joined to a cylindrical wall (reference 21 & 27) to define a projectile cavity (reference C) and a rearward extending annular insertion flange (reference 35), whereby the

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insertion flange can be received within a shell rim, the projectile nose comprising a rear plug wall (reference 34) joined to a cylindrical wall and a forward end joined to the cylindrical wall, the combination of the forward end, the cylindrical wall and the rear plug defining a nose cavity, the projectile nose composed of a frangible rigid material and a payload (reference P) disposed within the cavity of the projectile nose, whereby the payload is laterally dispersed from the projectile nose upon impact. Wherein the rear wall of the projectile nose is joined directly to the forward wall of the projectile base. Although Barr does not expressly disclose the specific propulsion shell, Barr et al. does. Barr et al. teaches a non-lethal munition comprising a projectile and cartridge/propulsion shell, the propulsion shell comprising an annular forward wall having a forward shell rim, a shell base joined to the shell forward wall and a propulsion cavity disposed in the shell base, the propulsion means retained by the propulsion cavity, whereby a flange of the projectile is received within the shell rim. Barr and Barr et al. are analogous art because they are from the same field of endeavor: non-lethal munitions. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the cartridge as taught by Barr et al. with the projectile as taught by Barr. The suggestion/motivation for doing so can be found in the Abstract of Barr and all of the component parts are known in the references. The only difference is the combination of the "old elements" into a single device and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention. Although neither Barr nor Barr et al. expressly disclose the projectile nose composed of a polymer foam material, Klein does. Klein teaches a non-lethal projectile ammunition comprising a projectile comprising a projectile



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nose composed from Styrofoam (i.e. polymer foam), a projectile base and a payload comprising a chemical agent mixed with a marking powder. Barr, Barr et al. and Klein are analogous art because they are from the same field of endeavor: non-lethal projectiles. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the Styrofoam material for the nose as taught by Klein with the non-lethal projectile as taught by Barr and Barr et al. The suggestion/motivation for doing so would have been to obtain a non-lethal projectile that had adequate stiffness during flight as taught by Klein ¶ 49.

Furthermore it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

#### **(10) Response to Argument**

I. Appellant's arguments are generally related to the elements of the references having different names than the names given to the elements of the present application. The term utilized in an application or reference is irrelevant when the structure disclosed is the same as the claimed structure. Barr et al. clearly shows the equivalent structure in the specification and figures, the examiner has attached the referenced figures associating the equivalent structure of Barr et al. with the same terms as that in the present claims. As shown, Barr et al. discloses the each element of the present claims and each element has the ability of performing as that of the claimed structure.

Barr et al. specifically discloses that the walls of the cavity that contain the payload material form longitudinal weak zones which are relatively easy to rupture upon impact with the target

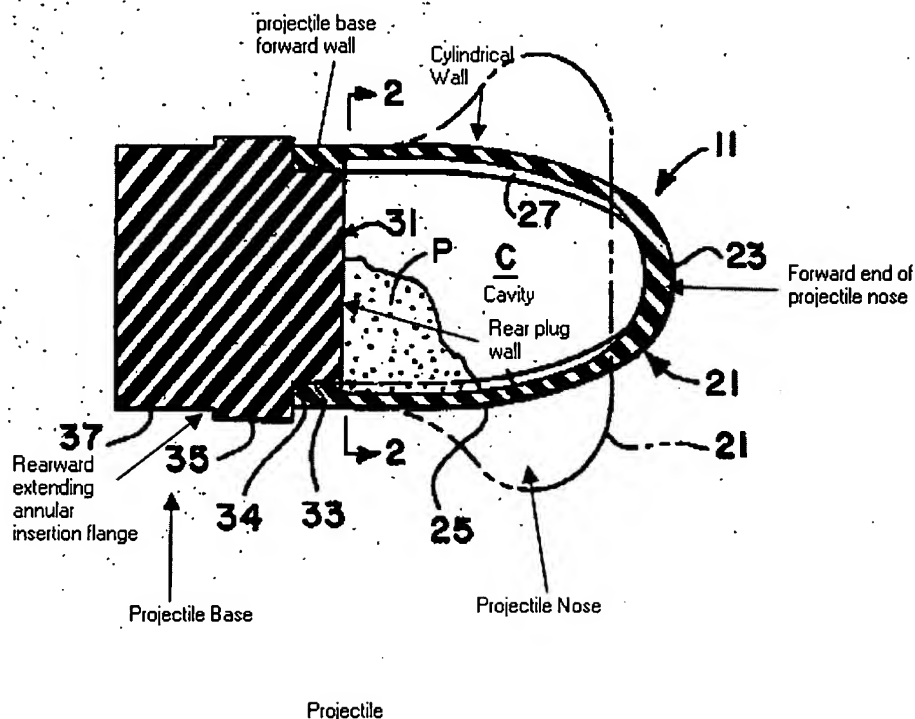
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allowing lateral dispersal of the payload material. Appellant does not appear to argue that the device of Barr et al. is not the same as or does not work the same as the device of the present invention but merely appears to argue the elements terms utilized by Barr et al. Appellant further argues that substituting the foam material taught by Klein for the elastic or rubber material as disclosed by Barr et al. would result in a nonfunctional device. Appellant has mistakenly attempted to substitute the material of Klein for only part of the projectile nose of Barr et al. At p. 16 of the Appeal Brief, appellant appears to substitute the foam material only for the forward end portion (reference 53) rather than for the entire projectile nose. Furthermore, appellant states that Barr et al. would be inoperable if it was formed of a rigid form nose rather than a synthetic rubber because the nose would rupture rather than acting as a piston, causing rupture of the base housing. This statement is incorrect in that the projectile nose would still be entirely made of the same material (the rigid foam as suggested by Klein) and the cylindrical wall portions (reference 55a) of Barr et al. would still be thinner than the rounded forward end portion (reference 53b) thereby causing the thinner wall portions to rupture prior to the rounded forward end portion and allowing the rounded forward end portion to act as a piston. With regards to the "rear plug wall", the rear wall of the projectile nose is shown in the figures above; again appellant appears to be arguing the terms used by the reference rather than the structure of the reference.

II. With respect to the reference of Barr, appellant also appears to argue against the terms used in the reference rather than asserting that the reference does not teach the claimed structure. The figure below shows the elements of Barr as they relate to the claimed terms of the present application. Appellant appears to argue that the projectile nose rear plug must be a completely separate and distinct component from the projectile base, however this is not the case

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in that the claims do not require such and do not establish that the projectile base cannot perform the rear plug wall of the projectile nose.



With regards to appellant's arguments concerning the combination of the references, please see examiner's answer above since appellant does not offer any further arguments than offered in section I. Appellant has erroneously stated that the teaching-suggestion-motivation (TSM) test is the *only* rationale for determining obviousness. However, the Supreme Court has stated that while the TSM test is useful, it is not the only rationale that may be relied upon to support a conclusion of obviousness.

#### **(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.


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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Michelle Clement/  
Primary Examiner, Art Unit 3641

Conferees:

Troy Chambers   
Meredith Petravick 